**Deployment of Cleaner Fuels and Renewable Energies in Barbados (BA-L1012)**

**Gender Assessment**

1. **Context**

***Closing the Gender Gap***

According to the Human Development Index, Barbados has achieved a “very high” level of human development which is reflected by high levels of school enrollment, length of education, life expectancy and income per capita[[1]](#footnote-1). Additionally, according to Global Gender Gap Report (GGGR) developed by the World Economic Forum (WEF) Barbados was ranked as the 24th country in the world, the third country in Latin America and the Caribbean (LAC) and first country in the Caribbean that has closed gender gaps (over 74%). These advances in terms of gender equality are also reflected by the progress made in school enrollment and access to health. For example, the increase in the percentage of women enrolled in secondary and tertiary education between 2000 and 2014 is particularly high, passing from 91.3% to 100% and from 59.5% to 90.6%, respectively. Also, when comparing those rates to those of men (from 92.5% to 98.9% and from 22.2% to 40.3%, respectively) it is clear that women’s educational enrollment, particularly in tertiary education, is higher[[2]](#footnote-2). Moreover, women’s life expectancy has increased from 75.6 years in 2000 to 78 years in 2014 and higher than those of men (from 71 to 73.2 years in the same period) and female mortality rate under 5 has decreased from 14.9/1000 to 11.8/1000 in the same period (male mortality rate under 5 decreased from 17.6/1000 to 14.1/1000). Moreover, Barbados has one of the highest female labor force participation rates of the Caribbean (62%[[3]](#footnote-3) vs a regional average of 56.7%, see graphic 1).

Graphic 1 – Labor Force Participation Rate in the Caribbean, 2013 (by sex)

Note: Data available only for 8 countries for 2013

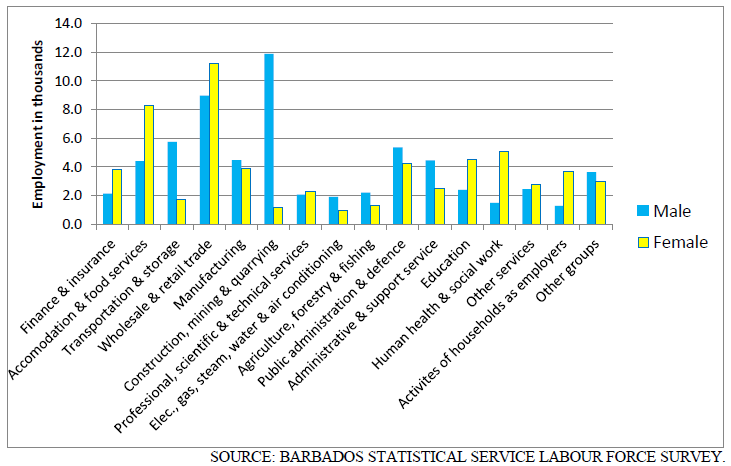
Source: ILO (2013). ILOSTAT Database: Caribbean

***Persistent Gender Inequalities***

However, there are still important gender gaps that primarily affect women. In fact, even if women’s labor participation is among the highest in the Caribbean, when doing a deeper analysis on occupational roles and wages, it is possible to notice these gaps. First, occupational segregation is extremely evident in Barbados. Women are highly concentrated in sectors of the economy such as services, tourism, and retail; while men are more concentrated in construction, mining and transportation. For example, women represent over 66% of the total employees of the accommodation and food services sector, while men represent 92% of the construction, mining, and quarrying sector (see graphic 2). Specifically when analyzing the electricity, gas, steam, water and air conditioning sector, it can be noticed that women also are under-represented in this sector since they represent about 34% of the total number of employees (see graphic 2). This is important since women tend to work in sectors with lower wages and less benefits.

Second, gender income gap is still high in Barbados, with female employees earning less on average than male. In fact, according to an IDB study, women in Barbados earn between 14% and 27% less than man[[4]](#footnote-4). Lower earnings can be explained, in part, by the type of jobs that women do, but also by their concentrations in economic sectors than tend to be less competitive.

Graphic 2 – Male and Female Employment by Sector, 2012



All these factors, contribute to higher levels of poverty among women than men, particularly women-headed households. In fact, women-headed households account for 47.5% of all the households in Barbados and the rate of poverty of these households is 19.4% compared to 11.5% in male-headed households[[5]](#footnote-5). Finally, early motherhood has decreased in the past 30 years, but the fertility rate among 15 to 19 year-olds (in other words adolescent pregnancy) is still 40.8% in 2012 (compared with 46% in 1980). This is particularly important because it increases school dropouts among young women and, therefore, it decreases their likelihood of continuing tertiary education and accessing formal, stable and high paying jobs[[6]](#footnote-6).

***Female Participation at the Nacional Petroleum Corporation***

In order to better understand female participation rate at the Barbados National Oil Company Limited (BNOCL) and the National Petroleum Corporation (NPC), the Deployment of Cleaner Fuels and Renewable Energies in Barbados (BA-L1012) project team collected sex-disaggregated data of the staff that currently works at the Nacional Petroleum Corporation (NPV). The data collection demonstrated that women only represent 25% of the total number of employees in the company. Moreover, when analyzing the number of women in management and technical positions, women represent only 28% of total managers and less than 4% of technical positions.[[7]](#footnote-7)

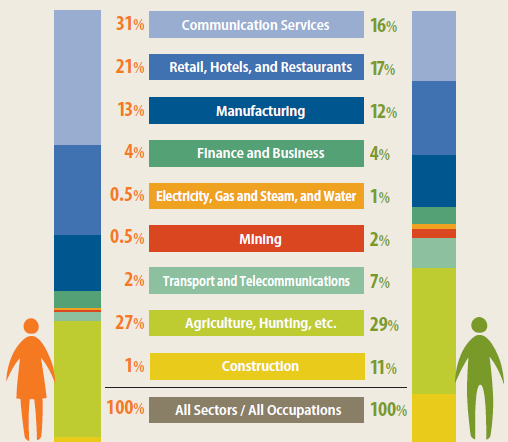
1. **Justification for gender additionality in the project**

The objective of the Deployment of Cleaner Fuels and Renewable Energies in Barbados project (BA-L1012) is to support Barbados’ energy security, by reducing its dependency on liquid fossil fuels and promoting the use of cleaner fuels and smart energy solutions. To reach this goal, one of the activities included in the components of the project is to training staff of the new organization resulting from the Barbados National Oil Company Limited (BNOCL) and National Petroleum Corporation (NPC) amalgamation.

***Justification***

Worldwide, employment distribution by sectors confirms that women primarily work in sectors such as communication services (31%), agriculture (27%) and retail (21%), but hardly work in sectors known as “non-traditional sectors” such as energy (electricity and mining combined make up for 1% of total number of women working in those sectors, see graphic 2), construction or transport.

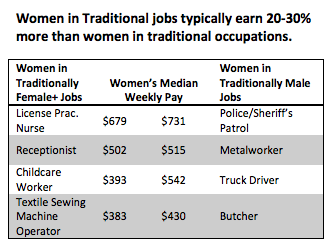
Graphic 2 - Female and Male Employment Distribution by Sectors



Source: World Bank (2012). World Development Report 2012: Gender Equality and Development.

The concentration of females and males in different sectors constitute one of the most significant areas where gender inequality manifests itself when analyzing labor markets and it is closely related to gender income gaps[[8]](#footnote-8). In fact, a study by the organization Wider Opportunities for Women found that in the US women that work in traditional sectors, such as services and retails, earn between 20% and 30% less than women that work in non-traditional sectors[[9]](#footnote-9) (such as metalwork or truck drivers). Moreover, these non-traditional sectors tend to offer better benefits for its employees since they are highly unionized and offer the possibilities of professional growth through promotions.

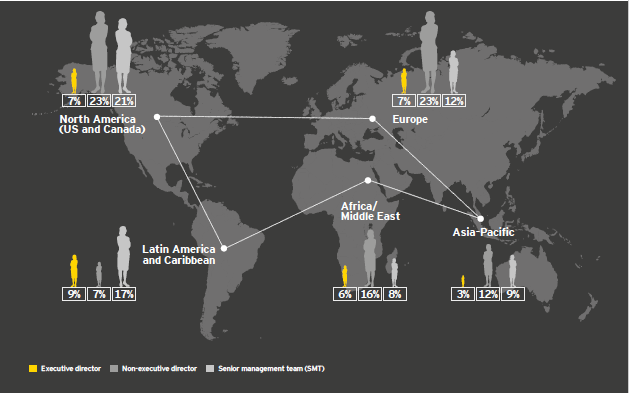
Table 2 - Monthly Average Female Salary by Type of Work, USA



Source: Wider Opportunities for Women (2010). Women and Nontraditional Work. Washington DC.

It is also important to highlight that a lot of women that work in non-traditional sectors end up leaving those sectors because the companies and organizations they work for have not been able to adapt to the needs and demands of their female employees. This translates into very few women in technical and managerial positions in non-traditional sectors. In fact, according to an Ernst and Young survey, worldwide women made up 5% of executive board members, 19% of non-executive directors’ members and 14% of senior management leadership positions in the top 200 power and utilities companies in 2016[[10]](#footnote-10). When analyzing the Latin American and Caribbean (LAC), the region has the highest percentage of female executive directors, but they only represent 9% of the total executive directors (or 2 executive directors when looking at absolute numbers). Moreover, in LAC 7% of non-executive directors and 17% of senior management leaders are women (see graphic 3). Overall, women in the region represent only 19.7% of the total number of employees in the electricity, gas and water sector.[[11]](#footnote-11) Hence, these sectors need to not only attract more women, but also need to adapt their policies to encourage more work/life balance, and combine them with the development of programs that help women to gain new skills, develop their networks and propel their professional careers. Training programs are, for example, a good way to help women’s career in these sectors.

Graphic 3 – Geographical Breakdown of Women in Strategic Roles in top 200 utilities



Source: Ernst and Young (2016). Women in Power and Utilities: Index 2016.

All this is relevant since the energy sector, particularly the Renewable Energy (RE) sector continues to grow. In 2013, worldwide over 6.5 million direct and indirect jobs were created in the renewable energy sector and according to the International Renewable Energy Agency (IRENA) more than 16.7 million jobs could be generated in this sector by 2030[[12]](#footnote-12). For example, the United States is seeing a rapid rise in deployment of solar photovoltaic (PV) in particular, along with strong investment in wind in several states and a leading focus on development of advanced biofuels. Overall, wind jobs in the US have increased by almost half - 43% - since last count to 73,000, whilst total solar employment surged 22% to 173,800 in 2014. And the employment of women in the US solar industry is on the rise, increasing from 26,700 to 37,500 last year[[13]](#footnote-13). In the LAC region, Brazil has created a considerable number of jobs in the renewable energy sector. For example, in 2013, 32,000 people were employed in the wind industry; however, the sector is predominantly male since women only account for 20 to 24% of total jobs[[14]](#footnote-14).

Occupational segregation is also a reality in Barbados. In fact, even if women’s labor participation is one of the highest of the Caribbean, the rate is still lower than men (62% vs 72%, respectively in 2013)[[15]](#footnote-15). Women in Barbados earn between 14% and 27% less than men[[16]](#footnote-16). And they are highly concentrated in sectors that have lower salaries and less benefits. For example, women represent only 34% of the electricity sector, but represent over 65% of the employees of the hotel and tourism sectors. Energy projects financed by the IDB, beyond supporting the development of the sector can provide, if adequately targeted, an opportunity to improve and expand economic opportunities for women.

Taking this into account, increasing women’s participation in non-traditional sectors, particularly in the RE sector, could help them to: i) increase their incomes; ii) provide them with more social benefits in the short and long term (health insurance, maternity leave and social security during retirement); and iii) grow professionally since they could have the possibility of being promoted within their companies. Also, taking advantage of women’s potential (they represent 50% of the population and possess over half of university degrees around the world) can result in: i) greater productivity for the energy sector; ii) better response to the increasing demand of workers; and iii) faster economic growth[[17]](#footnote-17). To ensure this, it is necessary that not only more women are attracted to the sector, but also that women that are already working in the sector, stay in the sector and access the opportunities to grow within their professions. In that sense, energy and utility companies need to put in place programs that promote gender equality through the implementation of activities focused on developing women’s skills and encouraging growth within their professional careers, among others. Therefore, training programs are key to promote women’s participation and professional development.

Some impact evaluations have demonstrated that training women in non-traditional jobs resulted in not only an increase of their income, but also gains in practical skills, self-esteem, and social benefits for their families. For example, a training program for women in 39 occupations, primarily non-traditional occupations, carried out by the World Bank in Nepal demonstrated that the treatment group had increased their non-farm employment by 14 percentage points, for an overall gain in employment of 47% relative to the control group; and average monthly earnings increased by approximately 45% for the 2010 cohort and 66% for the 2011 cohort relative to the control group[[18]](#footnote-18). Another initiative carried by the World Bank in Bangladesh trained rural women on i) direct current lamp assembly, accompanied by hands-on training with hardware, and ii) the role of the electronic components in an integrated electronic circuit and its operation. This program resulted in: i) the creation of employment opportunities for women; ii) an increase of their family income; and 3) the development of women’s technical as well as managerial skills. According to the evaluation, women’s daily average income has increased by approximately $2 (the average households income in the intervened region was $50 per month)[[19]](#footnote-19). Finally, in 2012 the Multilateral Investment Fund (MIF) implemented a sustainable water project in Mexico that included a pilot to train women as plumbers. The pilot program, called “Women Plumbers”, identified and trained technical staff, mostly women, to be responsible for the replacement of existing water facilities with more efficient new ones. By the end of 2014, the project generated employment for about 50 women in the pilot stage, in an area of the country where jobs are hard to find[[20]](#footnote-20).

***Gender Additionality***

Taking into account gender gaps in Barbados, the project will include a gender activity, **as an additionality**, to encourage women that are currently working at BNOCL and NPC to develop new skills through the trainings that will be financed with “component 3 - Technical Advisory Services. The next section provides more details.

1. **Gender Intervention**

Based on the information provided in the previous sections, the Deployment of Cleaner Fuels and Renewable Energies in Barbados project (BA-L1012) will, therefore, include among its components, an activity to train technical and management personnel of Barbados National Oil Company Limited (BNOCL) and the National Petroleum Corporation (NPC), and any additional individuals needed, in areas that will strengthen the ability to enter into PPP contracts, to operate and manage the expansion of Natural Gas facilities, and in areas that will lead to achieving ISO certification. To ensure women’s participation in these trainings, the project will aim at ensuring that at least 30% of people trained by this project are women. By including this target, the project expects that women, regardless of their current position (administrative, technical or other) will not only access to these training opportunities, but also gain new skills, develop their professional networks and be exposed to new technology, resulting in better job opportunities in the clean energy sector.

1. CDB (2016). Barbados Country Gender Assessment. CDB: Wildey, Barbados. [↑](#footnote-ref-1)
2. World Bank (2014). GenderStats: Barbados. [↑](#footnote-ref-2)
3. ILO (2013). ILOSTAT Database: Barbados. [↑](#footnote-ref-3)
4. Bellony, Annelle; Hoyos Alejandro; and Nopo, Hugo (2010). Gender Earning Gaps in the Caribbean: Evidence from Barbados and Jamaica. IDB: Washington DC. [↑](#footnote-ref-4)
5. CDB (2016). Barbados Country Gender Assessment. CDB: Wildey, Barbados. [↑](#footnote-ref-5)
6. CDB (2016). Barbados Country Gender Assessment. CDB: Wildey, Barbados. [↑](#footnote-ref-6)
7. NPC (2016). NPC Staff Composition Disaggregated by Sex. [↑](#footnote-ref-7)
8. The underutilization of the labor force influences the performance of the economy in a sub-optimal level of the economy since it produces less of what could, resulting in a low economic growth for country. [↑](#footnote-ref-8)
9. The term “non-traditional sectors” means occupations or sectors of work for which individuals of one gender comprise less than 25 percent of individuals employed in each such occupation or field of work. See: Hegewisch, Ariane and Hartmann, Heidi (2014). Occupational Segregation and the Gender Wage Gap: A Job Half Done. Institute for Women’s Policy Research. [↑](#footnote-ref-9)
10. Ernst and Young (2016). Women in Power and Utilities: Index 2016. [↑](#footnote-ref-10)
11. IDB (2015). Sistema de Información de Mercados Laborares y Seguridad Social. [↑](#footnote-ref-11)
12. Marcos, Paloma (2014). Gender and Renewable Energy: Wind, Solar, Geothermal and Hydroelectric Energy. IDB: Washington, DC. [↑](#footnote-ref-12)
13. Aguilar, Lorena ([2015](http://www.huffingtonpost.com/lorena-aguilar/unleashing-the-power-of-w_b_8338842.html)). Unleashing the Power of Women in the Renewable Energy Sector [↑](#footnote-ref-13)
14. Marcos, Paloma (2014). Gender and Renewable Energy: Wind, Solar, Geothermal and Hydroelectric Energy. IDB: Washington, DC. [↑](#footnote-ref-14)
15. ILO (2013). ILOSTAT Database: Caribbean [↑](#footnote-ref-15)
16. Bellony, Annelle; Hoyos Alejandro; and Nopo, Hugo (2010). Gender Earning Gaps in the Caribbean: Evidence from Barbados and Jamaica. IDB: Washington DC. [↑](#footnote-ref-16)
17. Several studies have demonstrated that gender equality has negative impact in the economic development of a country. See: Cuberes and Teignier (2011 and 2015); Klasen (2002); and Dollar and Gatti (1999), among others. [↑](#footnote-ref-17)
18. World Bank ([2015](http://documents.worldbank.org/curated/en/465841467999715075/pdf/101061-AR-P133146-PUBLIC-Box393257B-WBG-GenderTrustFunds-Report-2015.pdf)). Partnering for Gender Equality. [↑](#footnote-ref-18)
19. World Bank (2004). Opportunities for Women in Renewable Energy Technology Use in Bangladesh. [↑](#footnote-ref-19)
20. MIF ([2012](http://www.fomin.org/en-us/Home/News/PressReleases/PAMexicoPlumbers.aspx)). Project Announce; and Berardi, Filippo ([2015](https://www.fomin.org/en-us/Home/FOMINblog/Blogs/DetailsBlog/ArtMID/13858/ArticleID/2806/The-energy-water-and-climate-win-win-win-win-solution.aspx)). The energy, water and climate “win-win-win-win” solution. Fomin Blog. [↑](#footnote-ref-20)